



[4910-13-P]

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2014-0172; Directorate Identifier 2013-NM-222-AD]**

**RIN 2120-AA64**

**Airworthiness Directives; Embraer S.A. Airplanes**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Notice of proposed rulemaking (NPRM).

**SUMMARY:** We propose to adopt a new airworthiness directive (AD) for certain Embraer S.A. Model ERJ 170 airplanes. This proposed AD was prompted by reports of “BLEED 1(2) LEAK” messages displayed on the Engine Indication and Crew Alert System (EICAS), and indirect damage to components of the Electrical Wiring Interconnection System (EWIS) in the engine pylon area. This proposed AD would require inspecting the EWIS components for damage, and repair if necessary. This proposed AD would also require installing pre-cooler deflectors on the left- and right-hand pylons, and applying silicone sealant. We are proposing this AD to prevent indirect damage to EWIS components near the engine bleed air pre-coolers, which could result in a dual engine roll back to idle and consequent dual engine power loss and reduced controllability of the airplane.

**DATES:** We must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.

- Fax: 202-493-2251.

- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

- Hand Delivery: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this proposed AD, contact Embraer S.A., Technical Publications Section (PC 060), Av. Brigadeiro Faria Lima, 2170 - Putim - 12227-901 São Jose dos Campos - SP – BRASIL; telephone +55 12 3927-5852 or +55 12 3309-0732; fax +55 12 3927-7546; email [distrib@embraer.com.br](mailto:distrib@embraer.com.br); Internet <http://www.flyembraer.com>. You may view this referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221.

## **Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2014-0172; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this proposed AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Operations office (telephone 800-647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

**FOR FURTHER INFORMATION CONTACT:** Kathrine Rask, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue SW., Renton, WA 98057-3356; telephone 425-227-2180; fax 425-227-1320.

## **SUPPLEMENTARY INFORMATION:**

### **Comments Invited**

We invite you to send any written relevant data, views, or arguments about this proposed AD. Send your comments to an address listed under the ADDRESSES section. Include “Docket No. FAA-2014-0172; Directorate Identifier 2013-NM-222-AD” at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed AD based on those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this proposed AD.

## **Discussion**

The Agência Nacional de Aviação Civil (ANAC), which is the aviation authority for Brazil, has issued Brazilian Airworthiness Directive 2013-11-01, effective November 4, 2013 (referred to after this as the Mandatory Continuing Airworthiness Information, or “the MCAI”), to correct an unsafe condition for certain Embraer S.A. Model ERJ 170 airplanes. The MCAI states:

This [ANAC] AD results from reports of “BLEED 1(2) LEAK” messages being displayed on the Engine Indication and Crew Alert system (EICAS) panel, and indirect damages to components of the Electrical Wiring Interconnection System (EWIS) on the engine pylon area, zones 419 and 429, adjacent to the exhaust flange of the engine bleed air precooler.

Further investigation has shown that a leakage on the flange of the precooler refrigerating air exhaust duct caused the damage and triggered the message. We are issuing this [ANAC] AD to prevent EWIS components indirect damage, near to engine bleed air precooler, which could result in a dual engine roll back to idle and the consequent dual engine power loss.

Required actions include inspecting the EWIS components adjacent to the left- and right-hand pre-cooler for damage, and repair if necessary; installing pre-cooler deflectors on the left- and right-hand pylons, and applying silicone sealant. You may examine the MCAI in the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2014-0172.

### **Relevant Service Information**

Embraer has issued EMBRAER Service Bulletin 170-36-0019, dated August 23, 2011; and Subject 20-62-00, “Requirements for EWIS Components Inspections and Checks — Maintenance Practices” of EMBRAER 170/175/190/195 Standard Wiring Practices Manual SWPM-1590, Revision 25, dated June 3, 2013. The actions described in this service information are intended to correct the unsafe condition identified in the MCAI.

### **FAA’s Determination and Requirements of this Proposed AD**

This product has been approved by the aviation authority of another country, and is approved for operation in the United States. Pursuant to our bilateral agreement with the State of Design Authority, we have been notified of the unsafe condition described in the MCAI and service information referenced above. We are proposing this AD because we evaluated all pertinent information and determined an unsafe condition exists and is likely to exist or develop on other products of the same type design.

## **Costs of Compliance**

We estimate that this proposed AD would affect 181 products of U.S. registry.

We also estimate that it would take about 6 work-hours per product to comply with the basic requirements of this proposed AD. The average labor rate is \$85 per work-hour. Required parts would cost about \$366 per product. Based on these figures, we estimate the cost of the proposed AD on U.S. operators to be \$158,556, or \$876 per product.

We have received no definitive data that would enable us to provide cost estimates for the on-condition actions specified in this proposed AD.

## **Authority for This Rulemaking**

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. "Subtitle VII: Aviation Programs," describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in "Subtitle VII, Part A, Subpart III, Section 44701: General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

## **Regulatory Findings**

We determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

1. Is not a “significant regulatory action” under Executive Order 12866;
2. Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979);
3. Will not affect intrastate aviation in Alaska; and
4. Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

## **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

## **The Proposed Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

## **PART 39 - AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

**§ 39.13 [Amended]**

2. Amend § 39.13 by adding the following new AD:

**Embraer S.A.:** Docket No. FAA-2014-0172; Directorate Identifier 2013-NM-222-AD.

**(a) Comments Due Date**

We must receive comments by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to Embraer S.A. Model ERJ 170-100 LR, -100 STD, -100 SE, and -100 SU airplanes; and Model ERJ 170-200 LR, -200 SU, and -200 STD airplanes; certificated in any category; as identified in EMBRAER Service Bulletin 170-36-0019, dated August 23, 2011.

**(d) Subject**

Air Transport Association (ATA) of America Code 36, Pneumatic.

**(e) Reason**

This AD was prompted by reports of “BLEED 1(2) LEAK” messages displayed on the Engine Indication and Crew Alert System (EICAS), and indirect damage to components of the Electrical Wiring Interconnection System (EWIS) in the engine pylon area. We are issuing this AD to prevent indirect damage to EWIS components near the engine bleed air pre-coolers, which could result in a dual engine roll back to idle and consequent dual engine power loss and reduced controllability of the airplane.



**(f) Compliance**

Comply with this AD within the compliance times specified, unless already done.

**(g) Required Actions and Compliance Time**

Within 8,000 flight cycles or 12,000 flight hours after the effective date of this AD, whichever occurs later, do the actions specified in paragraphs (g)(1), (g)(2), and (g)(3) of this AD.

(1) Do a general visual inspection of the EWIS components adjacent to the left- and right-hand pre-coolers (zones 419 and 429 respectively) for damage, in accordance with the instructions specified in Subject 20-62-00, “Requirements for EWIS Components Inspections and Checks — Maintenance Practices,” of EMBRAER 170/175/190/195 Standard Wiring Practices Manual SWPM-1590, Revision 25, dated June 3, 2013. Repair all damage before further flight, in accordance with the instructions specified in Subject 20-62-00, “Requirements for EWIS Components Inspections and Checks — Maintenance Practices,” of EMBRAER 170/175/190/195 Standard Wiring Practices Manual SWPM-1590, Revision 25, dated June 3, 2013.

(2) Install a new deflector on the left- and right-hand pre-cooler exhaust flange, in accordance with Part I or Part III, as applicable, of the Accomplishment Instructions of EMBRAER Service Bulletin 170-36-0019, dated August 23, 2011.

(3) Apply high temp silicone sealant to the left- and right-hand pre-cooler, in accordance with Part II or IV, as applicable, of the Accomplishment Instructions of EMBRAER Service Bulletin 170-36-0019, dated August 23, 2011.

**(h) Credit for Previous Actions**

This paragraph provides credit for actions required by paragraph (g) of this AD, if those actions were performed before the effective date of this AD using the service information specified in paragraph (h)(1) or (h)(2) of this AD.

(1) Subject 20-62-00, “Requirements for EWIS Components Inspections and Checks — Maintenance Practices,” of EMBRAER 170/175/190/195 Standard Wiring Practices Manual SWPM-1590, Revision 23, dated October 8, 2012, which is not incorporated by reference in this AD.

(2) Subject 20-62-00, “Requirements for EWIS Components Inspections and Checks — Maintenance Practices,” of EMBRAER 170/175/190/195 Standard Wiring Practices Manual SWPM-1590, Revision 24, dated February 18, 2013, which is not incorporated by reference in this AD.

**(i) Other FAA AD Provisions**

The following provisions also apply to this AD:

**(1) Alternative Methods of Compliance (AMOCs):** The Manager, International Branch, ANM-116, Transport Airplane Directorate, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the International Branch, send it to ATTN: Kathrine Rask, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue SW., Renton, WA 98057-3356; telephone

425-227-2180; fax 425-227-1320. Information may be emailed to:

9-ANM-116-AMOC-REQUESTS@faa.gov. Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office. The AMOC approval letter must specifically reference this AD.

**(2) Airworthy Product:** For any requirement in this AD to obtain corrective actions from a manufacturer, use these actions if they are FAA-approved. Corrective actions are considered FAA-approved if they were approved by the State of Design Authority (or its delegated agent, or the DAH with a State of Design Authority's design organization approval, as applicable). You are required to ensure the product is airworthy before it is returned to service.

**(j) Related Information**

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) Brazilian Airworthiness Directive 2013-11-01, effective November 4, 2013, for related information. This MCAI may be found in the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2014-0172.

(2) For service information identified in this AD, contact Embraer S.A., Technical Publications Section (PC 060), Av. Brigadeiro Faria Lima, 2170 - Putim - 12227-901 São Jose dos Campos - SP – BRASIL; telephone +55 12 3927-5852 or +55 12 3309-0732; fax +55 12 3927-7546; email [distrib@embraer.com.br](mailto:distrib@embraer.com.br); Internet <http://www.flyembraer.com>. You may view this referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221.

Issued in Renton, Washington, on March 19, 2014.

Ross Landes.  
Acting Manager,  
Transport Airplane Directorate,  
Aircraft Certification Service.

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